

P a t e n t C l a i m s

1. Spiral slot stacker for stacking sheet material, comprising
 - a stacker wheel (1) with slots spirally disposed one behind the other around a rotational axis for receiving the sheet material,
 - a stripper (2; 2a, 2b), which in a strip-out position strips out the sheet material from the slots of the stacker wheel, and
 - a stack deposit (4) for stacking the sheet material stripped off the slots,a first movable part (2) of the stripper (2) being adapted to be moved out of the strip-out position, while the stacker wheel (1) is rotating, in such a way that the sheet material (100) is stripped out from one of the slots of the stacker wheel and the sheet material (101) of a next slot remains in the stacker wheel, characterized in that a second movable part (2b) of the stripper (2) is adapted to be locked in the strip-out position and to be moved along with the rotating stacker wheel (1) in the not-locked state.
2. Spiral slot stacker according to claim 1, characterized by an auxiliary stack deposit (6), which is adapted to be moved between the stack deposit (4) and the stacker wheel (1).
3. Spiral slot stacker according to claim 2, characterized in that the auxiliary stack deposit (6) and the stack deposit (4) are adapted to be brought to the same level and to engage in a comblike fashion.
4. Spiral slot stacker according to one of claims 1 to 3, characterized in that the second part (2b) of the stripper (2) is adapted to be moved back to the strip-out position in an opposite direction to the rotating direction of the stacker wheel (1).
5. Bank note processing apparatus comprising one or several spiral slot stackers according to one of claims 1 to 4.

6. Method for stacking sheet material by means of a spiral slot stacker, which comprises a stacker wheel (1), which has slots spirally disposed one behind the other around a rotational axis for receiving the sheet material (98 to 113), comprising the following steps:

- supplying the sheet material into the slots of the stacker wheel,
- stripping out the sheet material from the slots of the stacker wheel onto a stack deposit (4) by means of a stripper (2; 2a, 2b) being in a strip-out position for forming a sheet material stack (5),
- when a predetermined number of sheets is reached, moving a first movable part (2a) of the stripper (2) out of the strip-out position, while the stacker wheel (1) rotates, in such a way that the last sheet (100) of the predetermined number of sheets is stripped out from the stacker wheel and the sheet material (101) of a next slot remains in the stacker wheel, preparing the spiral slot stacker for stacking a next sheet material stack, and
- moving back the first part (2a) of the stripper (2) to the strip-out position,

characterized by the following steps:

- releasing a second movable part (2b) of the stripper (2) from the strip-out position and moving along with the rotating stacker wheel (1), when the first part (2a) of the stripper (2) is moved out of the strip-out position,
- further supplying sheets into the slots of the stacker wheel, while the second part (2b) of the stripper (2) rotates along with the stacker wheel (1),
- locking the second moved-along part (2b) of the stripper (2) in the strip-out position, when the spiral slot stacker is prepared for stacking the next sheet material stack, and

- stripping out the sheet material located in the slots by means of the locked second part (2b) of the stripper (2), while the first part (1a) of the stripper (2) is moved back to the strip-out position.
7. Method according to claim 6, the step of preparing the spiral slot stacker for stacking a next sheet material stack comprising the following steps:
- introducing an auxiliary stack deposit (6) over the stack deposit (4) for temporarily stacking the next sheet material stack thereon,
 - removing the sheet material stack (5) from the stack deposit (4), and
 - bringing the auxiliary stack deposit (6), with the temporarily stacked sheet material stack, and the stack deposit (4) to the same level, after the sheet material stack (5) was removed from the stack deposit (4).
8. Method according to claim 6 or 7, the second part (2b) of the stripper (2) being moved back in an opposite direction as the rotating direction of the stacker wheel (1), as to lock the said second part (2b) of the stripper (2) in the strip-out position.